

Conclusions: Definitions varied considerably. As a result, logbook records of cases performed by a trainee cannot be accurately compared. A consensus opinion is urgently required.

0526: THE VIRTUAL JOURNAL CLUB: AN E-LEARNING TOOL TO PROMOTE CRITICAL APPRAISAL SKILLS AMONG SURGICAL TRAINEES

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Introduction: The development of critical appraisal skills is essential for surgeons in training. Journal clubs can help develop such skills. However, traditional journal club models based on didactic presentation sessions followed by group discussion have many limitations. In our experience they are often poorly attended with few having prepared sufficiently to enable an informed debate. To overcome some of these limitations, we developed a Virtual Journal Club (VJC) that utilizes an e-learning environment to facilitate the development of critical appraisal skills.

Method: The VJC model uses a facilitator (senior registrar) who selects and disseminates details of a recently published surgical paper to an email list of surgical trainees, foundation doctors and consultants from the department. Participants are then given 2 weeks to reply with their critical appraisal comments via email, Twitter or Facebook. All comments are then collated and a formal critical appraisal summary detailing the strengths and limitations of the paper under discussion is fed back to the group. In addition, letters to the editor are also submitted based on the critical appraisal generated by the group.

Conclusions: This novel VJC model using an e-learning environment is a feasible method of developing and maintaining critical appraisal skills.

0542: SELF-ASSESSMENT OF SKILLS ON A VIRTUAL-REALITY ORTHOPAEDIC TRAUMA SIMULATOR

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Introduction: There is a lack of literature to observe whether surgical trainees harbour the ability to self-assess technical skill competency within orthopaedics. We observed whether medical students can accurately self-assess their performance while learning new technical skills using a haptic-enabled virtual-reality (VR) dynamic hip screw (DHS) simulator.

Methods: 28 medical students (naïve to DHS procedures and VR simulation) performed 10 attempts. After each attempt, subjects estimated their performance on five performance metrics, which were also being recorded objectively in real-time by the simulator. Mann-Whitney U tests were used to calculate significance ($p < 0.05$).

Results: On first attempt, participants inaccurately self-assessed significantly with respect to time taken by 15.3% ($p = 0.006$), number of radiographs by 71.5% ($p < 0.001$), attempts by 29.1% ($p = 0.005$), Tip-Apex Distance by 227% ($p < 0.001$), and global score by 71.7% ($p < 0.001$). After the last attempt, participants improved accuracy in self-assessment in time taken by 5.7% ($p = 0.42$), number of radiographs by 6.3% ($p = 0.119$). However, participants were still significantly inaccurate in assessing attempts by 5.2% ($p = 0.004$), Tip-Apex Distance by 126% ($p < 0.001$) and global score by 16.7% ($p = 0.0001$).

Conclusions: Self-assessment is inaccurate and concerning, participants overestimated their performance. These results indicate that trainees require objective performance metrics from the VR DHS simulator to guide their subjective perception of self-assessment.

0543: THE IMPACT OF VIDEO GAMING ON THE ACQUISITION OF SKILLS OF FUTURE ORTHOPAEDIC SURGEONS

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Introduction: No study has examined the link between video-gaming exposure and skill acquisition in orthopaedic trauma simulation. We sought to assess whether video-gaming improves performance on a virtual-reality (VR) haptic-enabled, orthopaedic trauma simulator.

Methods: 38 medical students, naïve to VR surgical simulation, were recruited and stratified according to their exposure to video gaming. Group 1 ($n = 19$, video-gamers) were defined as those who play more than one hour per day in the last year, Group 2 ($n = 19$, non-gamers) were defined as those who play video games less than one hour per year. Both cohorts performed

10 attempts. Mann-Whitney U tests were used to calculate significance ($p < 0.05$) between seven objective metrics recorded by the simulator.

Results: All 38 subjects completed the study. The groups were not significantly different at baseline. After ten attempts, there was no significant difference between groups in time (4%; $p = 0.39$), fluoroscopy (6%; $p = 0.40$), number of radiographs (8%; $p = 0.28$), number of retries (14%; $p = 0.42$), tip-apex distance (6%; $p = 0.44$), percentage cut-out (45%; $p = 0.5$), global score (7%; $p = 0.13$).

Conclusions: Contrary to previous findings in literature, there was no difference between those with extensive video gaming experience and those without in gaining competency on a VR orthopaedic trauma simulator.

0574: TRAUMA CHEST DRAIN INSERTION – WOULD PERFECT PRACTICE MAKE PERFECT? SURGICAL TRAINEES' VIEWS ON COMPETENCY AND TRAINING REQUIREMENTS

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Introduction: General surgery trainees are expected insert a trauma chest drain unsupervised by ST4 level. However, streamlining of training can decrease exposure in this particular area. Chest drain insertion has a 30% complication rate, and inexperience increases the risk. Therefore an initial audit of surgical trainees in the South West was performed to identify experience levels and future training requirements in this area.

Methods: All surgical trainees (core and higher) in the Severn and Peninsula deaneries were asked to complete an online questionnaire regarding their experience and self-perceived level of competence and training requirements.

Results: 96 responses were received. 69 % of core trainees and 65 % of ST3 and ST4 trainees had inserted 3 or fewer trauma chest drains. 60 % of core and 62 % of ST3 and ST4 trainees felt they required further teaching. 69 % of all trainees felt a specific chest drain course should be mandatory in core training. Self-assessed competency improved with seniority.

Conclusions: Further simulated chest drain experience is required in the early years of training to supplement clinical experience. Specialist courses would be beneficial in improving core trainees' competency and safety. This would inevitably aid them in higher surgical training.

0592: THE IMPACT OF LAP SURGERY TEACHING ON MEDICAL EDUCATION AT THE SURGICAL SCOUTERS, AN UNDERGRADUATE SURGICAL SOCIETY

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Introduction: To evaluate "Live Audience Participation" (LAP) as a suitable surgical teaching method for undergraduate students at the University of Liverpool.

Methods: We used "PollEverywhere," an interactive tool, which allows lecture attendees to use mobile phones for LAP at 5 "out-of-hours" lectures in 2013. The data of feedback questionnaires ($n = 165$) at four of these lectures was evaluated.

Results: 28 LAP questions were asked, resulting in 417 correct and 106 incorrect answers. 615 "person-answers" remained outstanding. The mean score of the feedback question "LAP teaching helps my learning" was 7.5 (strongly agree = 10, strongly disagree = 1). Students also felt that LAP teaching allowed them to ask questions which they wouldn't ask in traditional lectures (mean = 7.0), and LAP helped maintain student concentration (mean = 7.5). Students did not feel that LAP inhibited the flow of the lecture or distracted from their learning experience (mean = 3.3 and 2.9 respectively).

Conclusions: LAP allowed 106 incorrect answers to be apparent to the speakers, which otherwise would not have been addressed during the lecture. Students feel comfortable in raising questions and interacting with the speaker during LAP teaching. LAP should be further tested in more UK medical schools.

0627: SURGICAL TRAINING IN PRIMARY CARE: A CROSS SECTIONAL STUDY OF GENERAL PRACTITIONERS WITH SPECIALIST INTERESTS (GPWSI) IN SURGERY

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